REMARKS

This is a full and timely response to the non-final Office Action mailed September 13, 2005. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

Present Status of Patent Application

Upon entry of the amendments in this response, claims 1-20 remain pending in the present application. More specifically, claims 1, 8, 14 and 16 are currently amended with no introduction of new matter; claims 2-7, 9-13, and 15 are unamended original claims; and claims 17-20 have been newly submitted with no new material being added. Applicant wishes to place on record his gratitude to the Examiner for suggestions provided in the Conclusion section of the Office Action. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

A. Claim Objections

Statement of the Objection

Claims 14-16 have been objected to because of the following informalities:

In claim 14, line 8, the word "grating" should be inserted after the word "diffraction" for better clarity.

Claims 15- 16 inherit the deficiency of claim 14 from which they depend.

Response to the Objection

Applicant has currently amended claim 14 to rectify the informality. Consequently, Applicant requests withdrawal of the objection followed by allowance of claims 14-16.

B. Claim Rejections under 35 U.S.C. §102(e)

Statement of the Rejection

Claims 1, 4-9, 12-16 have been rejected under 35 U.S.C. §102(b) as being anticipated by Ludman (US 4,387,955).

Response to the Rejection

A proper rejection under 35 U.S.C. §102(b) requires that a single prior art reference disclose each element of the claim. Furthermore, anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Applicant respectfully submits that rejected claims 1, 4-9, 12-16 are now allowable and hereby requests

withdrawal of the rejection followed by allowance of Claims 1, 4-9, 12-16. Responsive remarks related to individual claims are provided below.

Claim 1

Applicant respectfully draws attention to Ludman col. 6, lines 32-47, reproduced below for easy reference:

> Therefore, **in order to produce an operable multiplexer/demultiplexer** 10 a plurality of detectors 58, 60 and 62 are operably connected by means of for example, a plurality of optical fibers 64, 66 and 68, respectively, to points 52, 53 and 54. This is **accomplished by** mounting fibers 64, 66 and 68 in **an adjustable assembly** 70 made up of a mounting block 71 situated with an opening 73 in housing 42. Any suitable adjustable arrangement in the form of set screw 72 and spring 74, for example, may be utilized to adjust the position of block 71 and therefore fibers 64, 66 and 68 to coincide with points 52, 53 and 54, respectively. It should, however, be realized that any other arrangement for **adjustably aligning** fiber 44, holographic reflective grating A and fibers 64, 66 and 68 can also be used within the scope of this invention.
> (Emphasis added)

As described above, Ludman uses an adjustable assembly for "adjustably aligning fiber 44, holographic reflective grating A and fibers 64, 66 and 68." This is in contrast to Applicant's "use points" of Claim 1, where the "use points" are defined during fabrication of the diffraction grating rather than "adjustably" set during use of the diffraction grating. In the interests of highlighting this aspect, Claim 1 has been currently amended to include an input use point and an output use point that are defined during fabrication of the holographically-formed diffraction grating.

Applicant respectfully asserts that Ludman does not teach or disclose Applicant's "use points" as clarified in currently amended Claim 1.

Because a proper rejection under 35 U.S.C. §102(b) requires that a single prior art reference disclose each element of the claim, Applicant respectfully asserts that Ludman does not anticipate currently amended Claim 1. Consequently, Applicant requests withdrawal of the rejection, followed by allowance of Claim 1.

Claims 4-7

Because independent Claim 1 is allowable, Claims 4-7 that each depend directly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Consequently, Applicant respectfully requests allowance of Claims 4-7.

Claim 8

Applicant's currently amended method claim 8 includes: "determining a positional relationship between locations of use points and locations of recording points *when*

fabricating a holographic diffraction grating" together with providing an array mount having these points. This array mount is used to fabricate the holographic diffraction grating.

Applicant respectfully asserts that Ludman does not anticipate at least this aspect of Applicant's Claim 8 because Ludman does not disclose such locations upon an array mount used for fabricating a diffraction grating.

Consequently, Applicant requests withdrawal of the rejection, followed by allowance of Claim 8.

Claim 9

Because independent Claim 8 is allowable, Claim 9 that depends directly on Claim 8 is also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Consequently, Applicant respectfully requests allowance of Claim 9.

Claim 14

Ludman uses an adjustable assembly to adjustably position his "fibers 64, 66 and 68" (equivalent to Applicant's "use points") for aligning fibers 64, 66 and 68 with his holographic reflective grating A.

In contrast, Applicant's currently amended method claim 14 includes: "*using the recording points* in the array mount *for aligning* the array mount with the holographically-formed diffraction grating whereby the *use points* in the array mount are *automatically aligned* with the holographically-formed diffraction grating." This alignment process that is carried out by adjusting the array mount rather than by adjusting fiber positions, is described in Applicant's specification, specifically in paragraphs [0039] – [0042].

Applicant respectfully asserts that Ludman does not anticipate at least this aspect of Applicant's Claim 8 because Ludman uses an adjustable assembly to position his fibers for carrying out alignment.

Consequently, Applicant requests withdrawal of the rejection, followed by allowance of Claim 14.

Claims 15-16

Because independent Claim 14 is allowable, Claims 15-16 that each depend directly on Claim 14 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Furthermore, Applicant respectfully draws attention to Applicant's Claim 16, which includes "producing an interference fringe pattern" that is not taught or disclosed by Ludman.

Consequently, Applicant respectfully requests withdrawal of the rejection, followed by allowance of Claims 15-16.

C. **Rejections under 35 U.S.C. §103(a)**

Statement of the rejection

1) Claims 2, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludman (US 4,387,955) in view of Maeda (US 4,824,193).

2) Claims 3, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludman (US 4,387,955)

Response to the rejection

Attention is respectfully drawn to MPEP 706.2(j) *Contents of a 35 U.S.C. 103 Rejection*, which states in pertinent part:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) **must teach or suggest all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added)

Attention is also drawn to MPEP § 2143.03, which states in pertinent part:

> **If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious**. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) (Emphasis added)

Responsive remarks related to individual claims are provided below using the criteria described in MPEP 706.2(j) and MPEP § 2143.03.

Claim 2

As one of three criteria necessary to establish a *prima facie* case of obviousness, the cited references individually or combinedly must teach or suggest all the elements of Applicant's Claim 2. The claim elements of Claim 2 include those of independent Claim 1 from which Claim 2 is directly dependent. Applicants have been unable to find in Ludman and Maeda, individually or in combination, "use points" as defined in Applicant's Claim 1.

Consequently, for at least this reason, Applicant respectfully asserts that a *prima facie* case of obviousness cannot be established as is required for a proper rejection of Claim 2 under 35 U.S.C. 103(a). Applicant respectfully requests withdrawal of the rejection followed by allowance of Claim 2.

Withdrawal of the rejection is further requested in view of MPEP § 2143.03 cited above because Claim 2 is nonobvious as it depends upon Claim 1 that is nonobvious.

Claim 10

As one of three criteria necessary to establish a *prima facie* case of obviousness, the cited references individually or combinedly must teach or suggest all the elements of Applicant's Claim 10. The claim elements of Claim 10 include those of independent Claim 8 from which Claim 10 is directly dependent. Applicants have been unable to find in Ludman and/or Maeda, individually or in combination, an array mount having recording points and use points in the manner defined by Applicant's Claim 8.

Consequently, for at least this reason, Applicant respectfully asserts that a *prima facie* case of obviousness cannot be established as is required for a proper rejection of Claim 10 under 35 U.S.C. 103(a). Applicant respectfully requests withdrawal of the rejection followed by allowance of Claim 10.

Withdrawal of the rejection is further requested in view of MPEP § 2143.03 cited above because Claim 10 is nonobvious as it depends upon Claim 8 that is nonobvious.

Claim 3

Applicant respectfully requests withdrawal of the rejection for at least the reason that the rejection does not satisfy the requirements of MPEP § 2143.03. Specifically, Claim 3 is nonobvious as it depends on Claim 1 that is nonobvious. Hence, Applicant respectfully asserts that Claim 3 cannot be properly rejected under 35 U.S.C. 103(a), and hereby requests withdrawal of the rejection followed by allowance of Claim 3.

Claim 11

Applicant respectfully requests withdrawal of the rejection for at least the reason that the rejection does not satisfy the requirements of MPEP § 2143.03. Specifically, Claim 11 is nonobvious as it depends on Claim 8 that is nonobvious. Hence, Applicant respectfully asserts that Claim 11 cannot be properly rejected under 35 U.S.C. 103(a), and hereby requests withdrawal of the rejection followed by allowance of Claim 11.

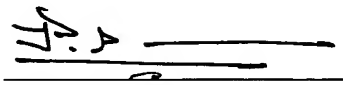
Prior Art Made of Record

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that claims 1-20 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned representative at (404) 610-5689.

Respectfully submitted,



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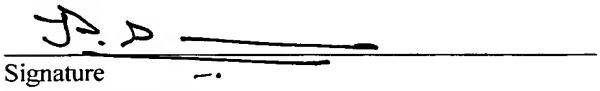
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA, 22313-1450, on **12 December 2005**



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